

इंटरनेट

मानक

### Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 11300 (1985, Reaffirmed 2009): Specification for Caraway Seeds. UDC 635.755



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



REAFFIRMED 2003

REAFFIRMED 1985  
IS: 11300

JAN 2009

*Indian Standard*  
SPECIFICATION FOR  
CARAWAY SEEDS

UDC 635.755



© Copyright 1985

**INDIAN STANDARDS INSTITUTION**  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

Gr 2

November 1985

**AMENDMENT NO. 1 JANUARY 1996  
TO  
IS 11300 : 1985 SPECIFICATION FOR  
CARAWAY SEEDS**

( *Page 4, Table 1* ) — Make the following changes:

- a) *Heading of col 4* — Substitute 'IS 1797 : 1985\*' for 'IS : 1797 - 1973\*'.  
b) *Sl No. (i), col 4* — Substitute '9†' for '10†'.  
c) *Sl No. (ii), col 4* — Substitute '6' for '7'.  
d) *Sl No. (iii), col 4* — Substitute '8' for '9'.  
e) *Sl No. (iv), col 4* — Substitute '14' for '15'.  
f) *Sl No. (v), col 4* — Substitute '15' for '16'.  
g) ( *Foot-note '\*\* Marked* ) — Substitute 'Methods of test for spices and condiments ( *second revision* )' for the existing matter.  
h) ( *Foot-note '† marked* ) — Substitute 'Annex A of IS 6364 : 1993 Tamarind pulp — Specification ( *second revision* )' for 'A-1 of IS : 6364 - 1979 [ Tamarind pulp ( *first revision* ) ]'.

( *Page 4, clause 3.1* ) — Substitute the following for the existing matter:

'3.1 Packing — The material shall be packed in clean, sound and dry container made of metal, glass, food grade polymers, wood or jute bags. The wooden boxes or jute bags shall be suitably lined with moisture proof lining which does not impart any foreign smell to the product. The packing material shall be free from fungal or insect infestation and should not impart any foreign smell. Each container shall be securely closed and sealed.'

( *Page 5, clause 3.2* ) — Substitute the following for the existing matter:

'3.2 Marking — The following particulars shall be marked directly on the container/package or on a label affixed on it:

- a) Name and address of the manufacturer or packer;
- b) Name of material ( Capsule or Seed );
- c) Trade name and brand name, if any;

**Amend No. 1 to IS 11300 : 1985**

- d) Grade designation;
- e) Batch or code number;
- f) Net mass;
- g) Month and year of packing;
- h) Best before (month and year); and
- j) Any other markings required under the *Standards of Weights and Measures (Packaged Commodities) Rules, 1977* and the *Prevention of Food Adulteration Act, 1954* and the Rules framed thereunder.

(Page 5, clause 4.1) — Substitute 'IS 13145 : 1993\*' for '3 of IS : 1797 - 1973\*'.  
.

(Page 5, clause 4.2) — Substitute the following for the existing clause:

"4.2 The sample shall be prepared as prescribed in 5 of IS 1797 : 1985 'Methods of test for spices and condiments (second revision)' except that the particle size should be about 500 µm IS sieve [see IS 460 (Part 1) : 1985†]."

(Page 5, clause 5.2) — Substitute '(see IS 1070 : 1992‡)' for '(see IS : 1070 - 1977‡)'.  
.

(Page 5, foot-notes) — Mark the following changes:

- a) \*Mark — Substitute '\*Spices and condiments — Methods of sampling (first revision)'.  
.
- b) †Mark — Substitute '(third revision)' for '(second revision)'.  
.
- c) ‡Mark — Substitute '‡Reagent grade water (third revision)' for the existing matter.  
.

# Indian Standard

## SPECIFICATION FOR CARAWAY SEEDS

Spices and Condiments Sectional Committee, AFDC 21

### Chairman

HORTICULTURAL COMMISSIONER

### Representing

Ministry of Agriculture and Rural Development  
( Department of Agriculture and Co-operation ),  
New Delhi

### Members

- |   |   |
|---|---|
| DR C. K. GEORGE ( <i>Alternate to Horticultural Commissioner</i> )              |   |
| SHRI M. BHATIA  | The All India Food Preservers' Association, New Delhi   |
| SHRI ANTONY CHERIAN   | Cardamom Board, Ernakulam   |
| DEPUTY DIRECTOR GENERAL, SUPPLIES AND TRANSPORT ( FOOD INSPECTION )             | Quarter Master General's Branch, Army Headquarters ( Ministry of Defence ), New Delhi                           |
| JOINT DIRECTOR, SUPPLIES AND TRANSPORT ( FOOD INSPECTION ) ( <i>Alternate</i> ) |   |
| SHRI OM P. DHAMIJA  | Export Inspection Council of India ( Ministry of Commerce ), Calcutta   |
| DR K. P. SRIVASTAVA ( <i>Alternate</i> )  |   |
| BRIG S. K. DIWAN  | Technical Standardization Committee ( Foodstuffs ) ( Ministry of Agriculture and Rural Development ), New Delhi |
| SHRI K. S. KRISHNAMURTHY ( <i>Alternate</i> )                                   |   |
| SHRI J. M. GANDHI   | Spices Export Promotion Council, Ernakulam  |
| SHRI N. S. R. MANDRAADIAR ( <i>Alternate</i> )                                  |   |
| SHRI R. C. GUPTA  | Directorate General of Technical Development ( Ministry of Industries ), New Delhi                              |
| SHRI N. S. KANDHARI ( <i>Alternate</i> )  |   |
| SHRI C. V. JACOB  | Synthite Industrial Chemicals Pvt Ltd, Cochin   |
| SHRI K. U. MATHAI   | Director of Health Services ( Government of Kerala ), Trivandrum  |
| DR A. G. MATHEW   | Regional Research Laboratory ( CSIR ), Trivandrum   |
| DR C. S. NARAYANAN ( <i>Alternate</i> )   |   |
| SHRI AJIT K. MERCHANT   | Laljee Godhoo and Company, Bombay   |
| SHRI V. B. GANATRA ( <i>Alternate</i> )   |   |

( Continued on page 2 )

© Copyright 1985

INDIAN STANDARDS INSTITUTION

This publication is protected under the *Indian Copyright Act* ( XIV of 1957 ) and reproduction in whole or in part by any means except with written permission of the publisher shall be deemed to be an infringement of copyright under the said Act.

( Continued from page 1 )

<i>Members</i>	<i>Representing</i>
DR A. G. NAIK-KURADE	Indian Dehydrated Food Products Manufacturers' Association, New Delhi
DR M. K. NAIR	Indian Council of Agricultural Research ( Ministry of Agriculture and Rural Development ), New Delhi
SHRI N. S. OMANAKUTTAN	Enjayes Spices and Chemical Oils Pvt Ltd, Kerala
DR V. PAUL	Hindustan Lever Limited, Bombay
SHRI M. RAJOPADHYE	State Trading Corporation of India Ltd, New Delhi
SHRI K. C. ANANTH ( Alternate I )	
SHRI K. GANGADHARAN ( Alternate II )	
SECRETARY	Central Committee for Food Standards ( Ministry of Health and Family Welfare ), New Delhi
ASSISTANT SECRETARY ( Alternate )	
SHRI KISHOR KUMAR SHAMJI	India Pepper and Spice Trade Association, Cochin
SHRI MANIKANT V. KHONA ( Alternate )	
DR M. L. SHANKARANARAYANA	Central Food Technological Research Institute ( CSIR ), Mysore
SHRI S. B. SINGH	Department of Health, Government of U.P., Lucknow
SHRI ATUL SINHA	Directorate of Marketing and Inspection ( Ministry of Agriculture and Rural Development ), Faridabad
DR A. K. BHATTACHARYA ( Alternate )	
DR K. THOTHATHRI	Botanical Survey of India, Calcutta
SHRI E. VELAPPAN	Directorate of Cocoa Arecanut and Spices Development ( Ministry of Agriculture and Rural Development ), Calicut
SHRI M. S. LAKSHMANACHAR ( Alternate )	
SHRI P. R. VISHWAMMBHARAN	Central Warehousing Corporation, New Delhi
SHRI K. G. MENON ( Alternate )	
SHRI T. PURNANANDAM,	Director General, ISI ( Ex-officio Member )
Director ( Agri & Food ) ( Secretary )	



# *Indian Standard*

## SPECIFICATION FOR CARAWAY SEEDS

### 0. FOREWORD

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 30 June 1985, after the draft finalized by the Spices and Condiments Sectional Committee had been approved by the Agricultural and Food Products Division Council.

**0.2** Caraway (*Carum Carvi* Linn. Apiaceae) (*umbelliferae*) is called in Hindi as *SHIA ZIRA*. It is grown largely in Netherlands and Morocco. It is cultivated to some extent throughout northern central Europe and India (in the north Himalayan regions; cultivated in the plains as a cold season crop and in the hills of Kashmir, Kumaon, Garhwal and Chamba at altitudes of 3 000 to 4 000 metres as summer crop).

**0.2.1** Caraway seed (*Carum Carvi*) is different from Black Caraway *carum bulbocastanum*, Koch (Apiaceae), which in Hindi is known as *KALA ZIRA*. Black Caraway is not normally cultivated and is found as wild growth largely in Afghanistan, Iran and India (Kashmir — 2 000 to 3 650 metres, Garhwal and Kumaon). Both types of Caraway are very similar in appearance. However, caraway seed contains slightly higher amount of volatile oil. Differences in the composition of oil from Caraway seed and Black Caraway are given in Appendix A for identification.

**0.3** For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

---

### 1. SCOPE

**1.1** This standard prescribes requirements and the methods of sampling and test for caraway seeds (*Carum Carvi* Linn.).

---

\*Rules for rounding off numerical values (*revised*).



## 2. REQUIREMENT

**2.1 Description** — The caraway seed shall be the carpel into which nearly mature fruits of *Carum Carvi* Linn. split after drying and on threshing. The carpel shall be  $4 \times 6$  mm long falcate. Longitudinally they shall bear fine pale to dark yellow ribs, the surface between the ribs being dark brown.

**2.2 Odour and Taste** — The flavour shall be characteristic, aromatic and not musty. The taste should be sharp and sweet pleasing aroma.

**2.3 Freedom from Moulds, Insects, etc** — The caraway seeds should be free from living insects and moulds, and should be practically free from dead insects, insect fragments and rodent contamination visible to the naked eye (corrected if necessary for abnormal vision with such magnification as may be necessary in any particular case). If magnification exceeds ten times, this fact should be stated in the test report.

**2.4 Extraneous Matter** — In caraway seeds, the proportion of extraneous matter including grass seeds and other non-caraway seeds shall not be more than one percent by mass.

**2.5** The caraway seeds shall also comply to the requirements given in Table 1.

TABLE 1 REQUIREMENTS FOR CARAWAY SEEDS

SL No.	CHARACTERISTIC	REQUIREMENT	REF TO CL OF IS : 1797-1973*
(1)	(2)	(3)	(4)
i)	Moisture, percent by mass, <i>Max</i>	13	10†
ii)	Total ash, percent by mass (on dry basis), <i>Max</i>	8	7
iii)	Acid insoluble ash, percent by mass, <i>Max</i>	1.5	9
iv)	Non-volatile ether extract, percent by mass (on dry basis), <i>Min</i>	17.5	15
v)	Volatile oil, ml/100 g (on dry basis), <i>Min</i>	2.5	16

\*Methods of sampling and test for spices and condiments (*first revision*).

†This shall be used as referee method whereas method given in A-1 of IS : 6364-1979 [Tamarind pulp (*first revision*)] shall be routine method.

## 3. PACKING AND MARKING

**3.1 Packing** — The caraway seeds shall be packed in sound, clean and dry containers made of jute, cloth, paper or polyethylene. The containers shall be free from insects or fungal infestation as well as from any undesirable odour.

**3.2 Marking** — Following particulars shall be marked or labelled on each container:

- a) Name of the material,
- b) Variety or the trade name,
- c) Batch or code number,
- d) Net mass,
- e) Date of packing, and
- f) Country of origin.

#### 4. SAMPLING

**4.1** The representative samples for testing shall be drawn as given in 3 of IS : 1797-1973\*.

**4.2 Preparation of Sample for Analysis** — The sample shall be prepared as prescribed in 6 of IS : 1797-1973\* with following modifications:

- a) As there is no particular difficulty in grinding caraway seeds, the addition of diatomaceous earth would not be necessary; and
- b) The sample should be ground to about 500  $\mu\text{m}$  IS sieve [ *see* IS : 460 ( Part 1 )-1978† ].

#### 5. TEST

**5.1** The tests shall be carried out by the methods specified in col 4 of Table 1.

**5.2 Quality of Reagents** — Unless specified otherwise, pure chemicals and distilled water ( *see* IS : 1070-1977‡ ) shall be employed in test.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the experimental results.

---

\*Methods of sampling and test for spices and condiments ( *first revision* ).

†Specification for wire cloth test sieves ( *second revision* ).

‡Specification for water for general laboratory use ( *second revision* ).

**A P P E N D I X    A**

( Clause 0.2.1 )

**COMPOSITION OF OILS FROM CARAWAY SEED AND  
BLACK CARAWAY**

<i>Caraway Seed ( Carum Carvi Linn. )</i>		<i>Black Caraway ( Carum Bulbocastanum )</i>	
Constituent	Percent	Constituent	Percent
Carvone	52	Aldehyde	20
<i>d</i> -limonene	44	Terpenes	80
Trace compounds ( dihydrocarvone, dihydrocarveol, derillyl alcohol, etc )	4		